Colon Cancer Screening Interventions

There is limited research on successful interventions to increase colon cancer screening. The Task Force on Community Preventive Services conducted a comprehensive literature review of studies published from 1966 until April, 2001. They used criteria based on execution, design suitability, number of studies, consistency of findings, and effect size to determine successful interventions. Based on these criteria, the Task Force found strong evidence to recommend reducing structural barriers, and sufficient evidence to recommend the use of client reminders to increase colon cancer screening. There was insufficient evidence to recommend any of the other intervention methodologies studied, including one-on-one education, group education, reducing client costs, small media, client incentives combined with reminders, and multi-component interventions that include media, education, and enhanced access.[1] Insufficient evidence means that there were not enough studies to conclude that these methods were either effective or ineffective; further research is needed to determine the potential impact of these methods.

This report outlines the successful intervention strategies to increase colon cancer screening. We also summarize those strategies with insufficient evidence to recommend them for increasing colon cancer screening. Several of these strategies have successfully increased use of other preventive services and therefore may be effective ways to increase colon cancer screening. For each strategy, we note whether it has been recommended to increase other preventive services. The table summarizes the strategies to increase colon cancer screening evaluated by the Task Force.

Table 1. Strategies to increase colon cancer screening

Strategy	Recommendation for colon cancer screening	Recommendation for other preventive services
Removal of structural barriers	Recommended	Rec. for breast screening
Client reminders	Recommended	Rec. for breast & cervical screening, vaccination
One-on-one education	Insufficient evidence	Insufficient evidence
Group education	Insufficient evidence	Insufficient evidence
Reduced client costs	Insufficient evidence	Rec. for breast screening, vaccination, tobacco cessation
Small media	Insufficient evidence	Rec. for breast screening
Client incentives with client reminders	Insufficient evidence	Rec. for breast screening
Multi-component interventions (media, education, and access)	Insufficient evidence	Rec. for breast & cervical screening, vaccination

Reducing structural barriers

According to the Task Force, *reducing structural barriers enables or facilitates client access to a preventive service (e.g., cancer screening) in a clinical or non-clinical setting through changes in such barriers as location, hours of operation, and availability of child care. These*

interventions are based on the premise that facilitating access to screening will increase demand for and use of these services.[1]

The Task Force found that all four relevant studies demonstrated strong evidence of the effectiveness of reducing structural barriers to increase colon cancer screening.

Client reminders

According to the Task Force, *client reminders advise people in communities or healthcare systems that they are due or late for screening. Reminders can be in the form of letters, postcards, or telephone calls and the content of reminders varies. Reminders can also be tailored to fit the client's risk profile or other relevant characteristics, such as the individual's barriers to screening.*[1]

The Task Force found that five of six relevant studies demonstrated sufficient evidence of the effectiveness of client reminders to increase colon cancer screening.

A study published in 2004 examined the effectiveness of sending client reminders timed to scheduled appointments with FOBT cards to increase colon cancer screening. Ten to 14 days before a client's appointment, three FOBT cards, standard FOBT instructions, and an introductory letter signed by the clinic director and the medical clinic's Colon Cancer Screening Program staff were sent to the patients. The letter discussed the importance of colon cancer screening, and included the scheduled appointment date and instructions on when to start the diet and collect the stool samples. The intervention group was significantly more likely to complete FOBT screening than the control group within the year. [2]

Another study published in 2002 examined the effectiveness of different reminder strategies, physician reminders, telephone reminders to patients, letter reminders to patients, and usual care, to increase colon cancer screening. The screening rates within one year in the physician reminder group (16.5%) and in the telephone and letter reminder groups (11.9%) were significantly higher than the screening rates in the control group (1.2%). The screening rates within one year in the telephone reminder group (14.7%) were significantly higher than in the letter reminder group (9.2%).[3]

Interventions with insufficient evidence

<u>One-on-one education (tailored or non-tailored)</u>

According to the Task Force, *the use of one-on-one education to promote cancer screening is based on the premise that dissemination of information about the benefits and availability of screening will motivate people to be screened. One-on-one education is defined as counseling by healthcare of allied health professionals (e.g., health educators) or by lay health advisors or volunteers. Clients receive the information by telephone or face-to-face in office or clinic settings or in homes or local gathering places. Counseling can be supplemented by the use of brochures, informational letters, or reminders. The interventions can be tailored to address risks, questions, or barriers relevant to the individual or not tailored.*[1]

The Task Force found two relevant studies that demonstrated positive effects, but concluded that two studies were not enough to claim sufficient evidence that one-on-one education increased colon cancer screening. There is also insufficient evidence to recommend one-on-one education to increase breast and cervical cancer screening.

Group education

According to the Task Force, *the use of group education is based on the premise that providing information about benefits and availability will increase demand for colorectal cancer screening. Group education interventions, led by health educators or lay health promoters, convey factual and motivational information about cancer screening in didactic or interactive formats. The sessions may include role-playing strategies and presentations by cancer survivors.*[1]

The Task Force found only one relevant study, which did not appropriately evaluate the intervention. There is also insufficient evidence to recommend group education to increase breast and cervical cancer screening.

Reduced client costs

According to the Task Force, *reduced client cost interventions are based on the premise that lower costs will increase demand for and use of screening services. Client costs for cancer screening can be reduced by paying for screening tests, their administration, or both; by providing insurance coverage; by reducing copayments for services; by reimbursing the client or the screening site for services rendered; or any combination of these approaches.*[1]

The Task Force did not identify any relevant studies reducing client costs to increase colon cancer screening. However, the Task Force has identified reducing client costs as an effective strategy for increasing breast cancer screening, improving vaccination, and improving tobacco cessation. Therefore, reducing client costs may have promise as a strategy for increasing colon cancer screening.

Small media (tailored or non-tailored)

According to the Task Force, *small media interventions can include the use of brochures, flyers, newsletters, informational letters, or videos and may or may not be tailored to fit the individual's risk profile. These interventions are based on the premise that dissemination of information about the benefits and availability of screening will motivate people to be screened for colorectal cancer.*[1]

The Task Force identified four relevant studies, three of which found negative results (participants who received the small media had slightly lower screening rates than controls). A fourth study found a positive effect of small media on screening rates. Due to the small number of studies and inconsistent findings, the Task Force concluded that there was insufficient evidence for the effectiveness of small media on increasing colon cancer screening. Small media interventions are recommended as a strategy for promoting breast cancer screening.

Client incentives combined with reminders

According to the Task Force, *client incentives are non-coercive rewards such as small amounts of money, coupons for retailers, or other gifts that motivate people to seek cancer screening for themselves or significant others.*[1]

The Task Force did not identify any relevant studies. The Task Force did find sufficient evidence to recommend client reminders combined with incentives as a strategy to promote breast cancer screening.

Multi-component interventions that include media, education, and enhanced access

According to the Task Force, *the use of mass media to increase cancer screening is almost always applied in the context of broader community programs that include small media (e.g., brochures, posters, or newsletters), either a small group or one-on-one educational component and, usually, an access-enhancing measure (removal of a financial or structural barrier). Use of multi-component interventions with media, education, and enhanced access is based on the premise that providing information about benefits and availability will increase demand for cancer screening and, along with making service more accessible by removing financial or structural barriers, will promote higher screening rates.*[1]

The Task Force did not identify any relevant studies. The Task Force found strong evidence to recommend multi-component interventions as strategies to increase breast and cervical cancer screening and vaccination use.

Provider interventions

A recent study examined the effectiveness of a provider-directed intervention to increase colon cancer screening among patients at a Veterans Affairs Medical Center.[4] The provider-directed intervention included a workshop on rationale and guidelines for colon cancer screening, and communication skills training with low literacy patients. Every 4 to 6 months, providers could attend feedback sessions on the center's and their own patient screening rates. These feedback sessions also offered an opportunity to review the earlier workshop material.

The intervention providers offered colon cancer screening to patients significantly more often than providers in the control group did. Providers in the intervention group offered colon cancer screening to 76% of patients; providers in the control group offered colon cancer screening to 69% of patients. In addition, patients of providers in the intervention group screened significantly more than patients of providers in the control group did. Forty-one percent of patients in the intervention group completed screening tests compared to 32% of patients in the control group. While this intervention strategy was successful, it does not provide sufficient evidence for recommendation according to the Task Force standards as it is the only study examining this intervention strategy. The Task Force has recommended provider interventions for other preventive services. Provider reminder systems have been recommended to increase vaccination and tobacco cessation; assessment and feedback for providers have been recommended to increase vaccination.

Conclusion

There has been infrequent colon cancer screening intervention research since April, 2001. Sending reminders and FOBT cards two weeks prior to scheduled appointments; provider, telephone, and letter reminders; and targeting providers through quality improvement workshops, individualized feedback, and training on communication have resulted in increased screening rates in the recent studies.[2,3,4]

There is great opportunity to examine further the effectiveness of any of the aforementioned intervention strategies to increase colon cancer screening. Efforts to increase colon cancer screening are still quite new, and some of the interventions not yet deemed sufficient may be found effective with further research. In the mean time, reducing structural barriers and offering client reminders to screen are promising interventions for health organizations to implement to increase their colon cancer screening rates.

References

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June 2005